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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,563	06/30/2003	Christoph Schmidt	MERCK-2715	7256
23599 7590 10/01/2007 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			EXAMINER SCHLIENTZ, NATHAN W	
			ART UNIT 1616	PAPER NUMBER
			MAIL DATE 10/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/608,563	Applicant(s) SCHMIDT ET AL.	
	Examiner Nathan W. Schlientz	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 14 May 2007.

Status of Claims

Claims 1 and 8-10 have been amended, and claims 12-16 have been newly added in an Amendment filed 13 March 2007. As a result, claims 1-16 are pending and are thus examined herein on the merits for patentability. No claim is allowed at this time.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,596,070 for the reasons of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-11 and 13-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 99/20695 (hereinafter WO '695).

Applicant claims:

Claims 1-4 and 8-10 of the instant application are directed to a pigment preparation for use in a cosmetic formulation comprising a platelet-shaped, transparent and colorless substrate (S) comprising directly thereon at least a five-layer sequence of:

- (A) a SnO_2 layer having a layer thickness from 0.5 to 20 nm,
- (B) a TiO_2 layer in rutile form having a layer thickness from 30 to 400 nm,
- (C) a colorless coating having a refractive index of ≤ 1.8 and a layer thickness from 40 to 500 nm,
- (D) a SnO_2 layer having a layer thickness from 0.5 to 20 nm,
- (E) a TiO_2 layer in rutile form having a layer thickness from 30 to 400 nm, and optionally
- (F) an external protective layer;

wherein said (S) is selected from the group consisting of mica, glass, Al_2O_3 , SiO_2 and TiO_2 ; wherein said (C) is selected from the group consisting of SiO_2 , Al_2O_3 , $\text{AlO}(\text{OH})$, B_2O_3 , MgF_2 , MgSiO_3 , or a mixture thereof; wherein said (F) increases light, temperature and weather stability; wherein said pigment preparation is a dry preparation in the form of a pellet, granule, chip or briquette comprising water in an amount from 0% to 8% by weight of said dry preparation.

Claim 5 of the instant application is directed to a process of making a pigment preparation comprising coating a platelet-shaped substrate via a hydrolytic decomposition of a metal salt present in an aqueous medium.

Claim 7 of the instant application is directed to a pigment preparation further comprising at least one binder.

Claims 6 and 11 of the instant application is directed to an intended future use of said pigment preparation and as such will be given little probative patentable weight.

Claim 13 of the instant application is directed to a pigment preparation comprising the pigment of claim 1 and an organic dye, organic pigment, transparent or opaque white, colored or black pigment, platelet-shaped iron oxide, holographic pigment, LCP, or a transparent, colored or black luster pigment based on metal oxide-coated mica or on a SiO₂ platelet.

Claim 14 of the instant application is directed to a pigment preparation comprising natural or synthetic mica, nylon powder, pure or filled melamine resin, talc, glass, kaolin, an oxide or hydroxide of Al, Mg, Ca or Zn, BiOCl, barium sulfate, calcium sulfate, calcium carbonate, magnesium carbonate, carbon, or a mixture thereof.

Determination of the scope and content of the prior art

(MPEP 2141.01)

WO '695 teaches a pigment preparation (title) for use in a cosmetic formulation (page 4, lines 17-19; page 10, lines 4-6; and claim 11) comprising a platelet-shaped substrate (S) having at least a five-layer sequence (abstract; page 4, lines 1-36; page 6, lines 1-9; page 6, lines 35-36; page 7, lines 1-15; and claims 1-3) comprising:

- (S1) a tin oxide layer having a layer thickness from 1 to 30 nm,¹
- (A) a TiO₂ layer in rutile form having a layer thickness from 20 to 350 nm,²
- (B) a colorless coating having a refractive index of 1.8 and a layer thickness from 30 nm to 600 nm,³
- (B1) a SnO₂ layer having a layer thickness from 1 to 30 nm,⁴
- (C) a TiO₂ layer in rutile form having a layer thickness from 20 nm to 350 nm,⁵ and optionally
- (D) an external protective layer,⁶

wherein said platelet-shaped substrate (S) is selected from the group consisting of mica, glass, Al₂O₃, SiO₂ and TiO₂ (abstract; page 4, lines 21-36; and claims 1-3); wherein said colorless coating (B) is selected from the group consisting of Al₂O₃, AlO(OH), B₂O₃, MgF₂ and SiO₂ (page 6, lines 24-28; and claims 1, 2, 4, 6, 8 and 9); wherein said external protective layer (D) increases light and weather stability (page 9, lines 19-27; and claims 1 and 2); wherein said pigment preparation is a dry preparation in the form of a pellet, granule, chip or briquette comprising a moisture content in an amount from 0% to 8% by weight of said dry preparation (page 8, lines 7-11).

Also, WO '695 teaches a process of making a pigment preparation comprising coating a platelet-shaped substrate via a hydrolytic decomposition of a metal salt present in an aqueous medium (page 8, lines 1-14; and claims 1, 2 and 10). In addition,

¹ See page 6, lines 35-36; page 7, lines 1-10; and claim 2.

² See abstract; page 4, lines 1-5; page 6, lines 11-22 and 35-36; page 7, lines 1-11; and claims 1, 2, 4, 5, 8 and 9.

³ See abstract; page 4, line 7; page 6, lines 24-28; page 6, lines 35-36; page 7, lines 1-12; and claims 1, 2, 4, 6, 8 and 9.

⁴ See page 6, lines 35-36; page 7, lines 1-13; and claim 2.

⁵ See abstract; page 4, line 9; page 6, lines 30-36; page 7, lines 1-14; and claims 1, 2, 4, and 7-9.

⁶ See abstract; page 4, line 13; page 7, line 15; and claims 1 and 2.

WO '695 teaches for various target applications the multilayer pigment can be employed in blends with other pigments, such as transparent and hiding white, colored and black pigments, platelet-shaped iron oxide, organic pigments, holographic pigments, LCP, and conventional transparent, colored and black luster pigments based on metal oxide-coated mica and SiO₂ platelets (column 5, lines 51-58). Furthermore, WO '695 teaches the interference pigments comprising natural and synthetic mica, talc, kaolin, BiOCl, glass, Al₂O₃, ceramic flakes, etc. (column 2, lines 55-63).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Although WO '695 does not specifically mention imparting hydrophilic, hydrophobic or lipophilic properties, per se, to said pigment preparation in a cosmetic formulation, WO '695 does teach a pigment preparation for use in a cosmetic formulation, wherein said pigment preparation further comprises a customary extender, which intrinsically impart desired (i.e., hydrophilic, hydrophobic or lipophilic) properties to said pigment preparation in a cosmetic formulation (page 10, lines 4-6 and 15-17).

Also, although WO '695 does not specifically mention a titanium dioxide species that is in rutile form, per se, one of ordinary skill in the art would immediately envision a titanium dioxide species in rutile form, as it is well known in the art that titanium dioxide exists in only four limited forms, namely rutile, anatase, brookite and titanium dioxide (B).

In addition, although WO '695 does not specifically mention a dry pigment preparation that is in the form of a pellet, granule, chip or briquette comprising a

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moisture content in an amount from 0% to 8% by weight of said dry preparation, per se, one of ordinary skill in the art would immediately envision a dry pigment preparation that is in the form of a pellet, granule, chip or briquette comprising a moisture content in an amount from 0% to 8% by weight of said dry preparation, especially since WO '695 teaches drying and calcining the pigment preparation at temperatures between 250°C to 1000°C, which would obviously drive off residual moisture thereby resulting in a dry pigment preparation that is in the form of either a dried pellet, granule, chip or briquette comprising a moisture content in an amount from about 0% to about 8% by weight of said dry pigment preparation.

Furthermore, although WO '695 does not specifically mention imparting hydrophilic, hydrophobic or lipophilic properties, per se, to said pigment preparation in a cosmetic formulation, WO '695 does teach a pigment preparation for use in a cosmetic formulation, wherein said pigment preparation further comprises a customary extender, which are well known in the art to impart desired (i.e., hydrophilic, hydrophobic or lipophilic) properties to said pigment preparation in a cosmetic formulation (page 10, lines 4-6 and 15-17).

Finding of *prima facie* obviousness

Rational and Motivation (MPEP 2142-43)

Therefore, the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because each and every element of the claimed invention would have been reasonably suggested by the teachings of WO '695.

2. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '695, as applied to claims 1-11 and 13 above, in view of WO 99/46336 (the English language equivalent being U.S. Patent No. 6,419,736; hereinafter Pfaff et al. '736).

Applicant claims:

Claim 12 of the instant application is directed to a nail varnish, lipstick, compact powder, gel, lotion, soap or toothpaste comprising a pigment, the improvement wherein the pigment is one according to claim 1. Claim 15 of the instant application is directed to a pigment preparation comprising an oil, fat, wax, film former, preservative, thickener, rheological additive, or a surface active auxiliary, as well as a pigment according to claim 1.

Determination of the scope and content of the prior art

(MPEP 2141.01)

WO '695 teaches a pigment preparation for use in a cosmetic formulation, wherein said pigment preparation comprises: (S₁) a tin oxide layer; (A) a TiO₂ layer; (B) a colorless coating; (B₁) a SnO₂ layer; (C) a TiO₂ layer; and optionally (D) an external protective layer, as discussed in detail above.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

WO '695 does not explicitly teach the cosmetic formulation comprising the multilayered pigment to be a nail varnish, lipstick, compact powder, gel, lotion, soap or toothpaste. However, Pfaff et al. '736 teach a platelet-shaped substrate comprising a

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multilayered pigment, wherein the pigment is suitable for use in nail varnishes, gels, powders, ointments, emulsions, lipsticks, and other formulations (column 1, lines 53-67; and column 3, lines 34-40 and 59-63).

Finding of *prima facie* obviousness

Rational and Motivation (MPEP 2142-43)

Therefore, it would have been *prima facie* obvious for one skilled in the art at the time of the invention to use the platelet-shaped substrate with multiple layers as taught by WO '695 in cosmetic formulations, such as nail varnishes, gels, powders, ointments, emulsions, lipsticks, and other formulations, as taught by Pfaff et al. '736. One of ordinary skill in the art at the time of the instant invention would have been motivated to use the layered pigment of WO '695 in nail varnishes, gels, powders, ointments, emulsions, lipsticks, and other formulations, because WO '695 teaches their use in cosmetic formulations and Pfaff et al. '736 teach multilayered pigments used in said applications.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

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3. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '695, as applied to claims 1-11 and 13 above, in view of U.S. Patent No. 5,780,018 (hereinafter Collins et al.).

Applicant claims:

Claim 15 of the instant application is directed to a pigment preparation comprising a cosmetic raw material and a pigment according to claim 1, wherein the cosmetic raw material is an oil, fat, wax, film former, preservative, thickener, rheological additive, or surface active auxiliary. Claim 16 of the instant application is directed to a pigment preparation comprising a cosmetic active ingredient and a pigment according to claim 1, wherein the cosmetic active ingredient is an insect repellent, UVA/BC protection filler, anti-aging active agent, vitamin, self-tanning agent, bisabolol, LPO, ectoin, emblica, allantoin or a bioflavonoid.

Determination of the scope and content of the prior art

(MPEP 2141.01)

WO '695 teaches a pigment preparation for use in a cosmetic formulation, wherein said pigment preparation comprises: (S₁) a tin oxide layer; (A) a TiO₂ layer; (B) a colorless coating; (B₁) a SnO₂ layer; (C) a TiO₂ layer; and optionally (D) an external protective layer, as discussed in detail above.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

WO '695 does not teach the cosmetic formulation comprising a cosmetic raw material or cosmetic active ingredient, as in instant claims 15 and 16. However, Collins

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et al. teach a lipstick formulation comprising a color pellet, wherein the color pellet comprises a wax component, oil and fat component, and a pigment and/or pearlescing agent (Abstract; column 2, lines 27-31; and Claims 1-4, 7 and 9-10). Collins et al. further teach the color pellet comprising conventional lipstick ingredients such as vitamins, sunscreens, preservatives, and antioxidants (column 2, lines 32-38; and Claim 1).

Finding of *prima facie* obviousness

Rational and Motivation (MPEP 2142-43)

Therefore, it would have been *prima facie* obvious for one skilled in the art at the time of the invention to use the platelet-shaped substrate with multiple layers as taught by WO '695 in cosmetic formulations, such as lipsticks, and further comprising a wax component, oil and fat component, vitamins, sunscreens, preservatives, and/or antioxidants, as taught by Collins et al. One of ordinary skill in the art at the time of the instant invention would have been motivated to use the vitamins, sunscreens, preservatives, and/or antioxidants in the layered pigment of WO '695, because Collins et al. teaches said ingredients are conventionally used in lipstick formulations.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to Arguments

Applicant's Remarks filed 13 March 2007 have been fully considered.

1. Applicants argue on pages 6 and 7 that the instantly claimed thickness values of the layers and those of '070 are not anticipated. The examiner agrees and therefore the rejection with respect to 102(b) has been withdrawn. However, with respect to the 103(a) rejection, the examiner contends that the thickness values are *prima facie* obvious. Below is a table representing the instantly claimed thickness values (nm) and the preferred thickness values (nm) of the corresponding layers disclosed by '070.

<u>Instant claim 1</u>	<u>US 6,596,070</u>
(A) 0.5-20	(S1) 1-30
(B) 30-400	(A) 20-350
(C) 40-500	(B) 30-600
(D) 0.5-20	(B1) 1-30
(E) 30-400	(C) 20-350

Clearly, the thickness values for the corresponding layers are significantly overlapping. Therefore, the thickness values for the layers of the instant claims are *prima facie* obvious over the corresponding thickness values disclosed by '070.

2. Applicants argue on page 7 that the selection of thickness and direct application of the layer on the substrate results in pigments having significantly increased brightness, greater luster, a more pronounced color flop and higher stability compared to the referenced pigments. However, '070 discloses the layers coated on the substrate with thickness values that significantly overlap the instant claims, as discussed above. Therefore, the interference pigment of '070 would inherently possess the same properties of the instantly claimed pigment.

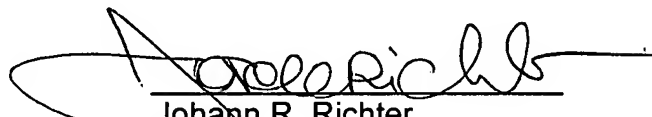
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Schlientz whose telephone number is 571-272-9924. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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